User Guide

INSIGNIA™

720p HD Digital Camcorder

NS-DV720PBL2

INSIGNIA™

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INSIGNIA

720p HD Digital Camcorder

Important safety instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use your camcorder near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not leave your camcorder near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Protect the power cord from being walked on or pinched particularly at plugs and the point where they exit from your camcorder.
10. Only use attachments/accessories specified by the manufacturer.
11. Unplug your camcorder during lightning storms or when unused for long periods of time.
12. Refer all servicing to qualified service personnel. Servicing is required when your camcorder has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into your camcorder, your camcorder has been exposed to rain or moisture, does not operate normally, or has been dropped.
13. To reduce the risk of fire or electric shock, do not expose your camcorder to rain, moisture, dripping, or splashing, and no objects filled with liquids, such as vases, shall be placed on it.
14. Batteries should not be exposed to excessive heat such as direct sunlight, fire, or the like.

Caution

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.

Introduction

Congratulations on your purchase of a high-quality Insignia product. Your NS-DV720PBL2 is designed for reliable and trouble-free performance.

Features

- Five megapixel sensor that can record movies in 720p high definition
- 4x digital zoom gives you increased control over the movies and pictures you take
- Internal memory lets you take pictures and movies without a memory card (approximately 90 MB of the internal memory is available for video and still image capture)
- Memory card slot lets you use an SD memory card (up to 4 GB) or SDHC memory card (up to 32 GB) to increase storage capacity
- Captures still images at 5 megapixel resolution
- LCD monitor to help you easily compose and view images
- HDMI ouput so you can easily play back movies and view pictures on an HDMI-enabled TV (HDMI cable not included)
- Automatic or manual color balance adjustment
- Image stabilization for recording reduces blurry movies from shaky hands or low-light conditions
- Simplified menu and user interface makes using your camcorder easy

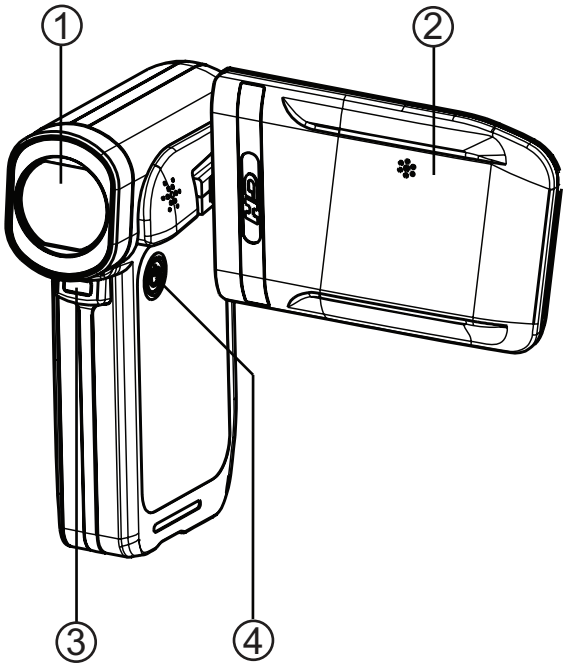
Package contents

- NS-DV720PBL2 720p HD digital camcorder
- USB cable
- A/V cable
- AC adapter/charger
- Lithium-ion rechargeable battery
- *Quick Start Guide*
- CD (software and *User Guide*)
- Wrist strap
- Carrying pouch

System requirements

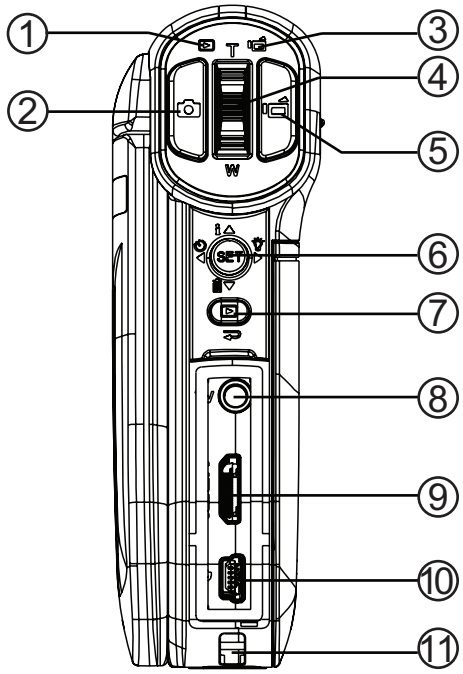
- Microsoft® Windows® XP, Windows Vista®, Windows 7 or Mac OS 10.x or higher
- Intel® Pentium®4 2.4GHz or higher processor
- 512 MB of RAM (memory)
- CD drive (DVD drive is required if you want to burn movies to DVD using the included ArcSoft MediaImpression software)
- 700 MB free hard drive space
- Available USB 2.0 port
- 16-bit color display

Front



#	Item	Description
1	Lens	Focuses the image when taking pictures or movies.
2	LCD panel	Lets you view pictures and movies while you are capturing them. Lets you view stored pictures and movies. Displays camcorder status information.
3	LED light	Turns on when you press ▷ on the five-way button.
4	⏻ (power button)	Press down for one second to turn your camcorder on or off.

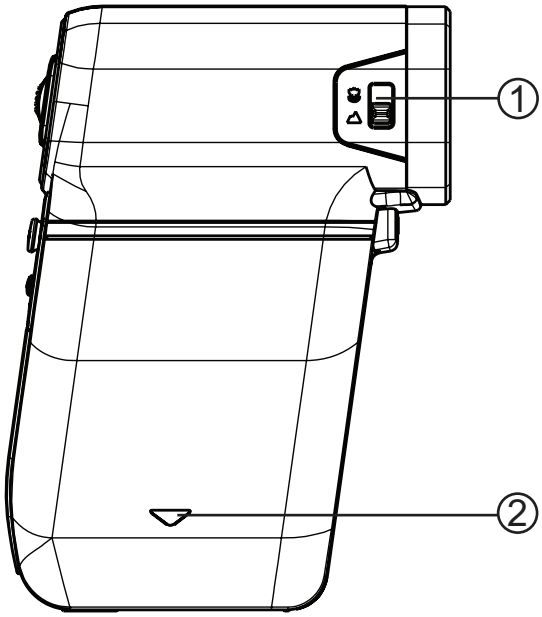
Back

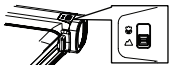


#	Item	Description
1	▷ (playback) LED indicator	Lights green when your camcorder is in playback mode.
2	(camera) button	Press to take a picture.
3	(record/power) LED indicator	Lights blue when your camcorder is in record mode. Flashes blue when the battery is recharging.
4	**T/W** (Tele/Wide) button	**In record mode** Press **T** to zoom in. Press **W** to zoom out. **In playback mode** In movie playback mode, press **T** to increase the volume or press **W** to decrease the volume. In picture playback mode, press **T** to zoom in or press **W** to zoom out.
5	(movie) button	**In record mode** Press to start recording a movie. Press again to stop recording. **In playback mode** Press to start and pause movie playback.

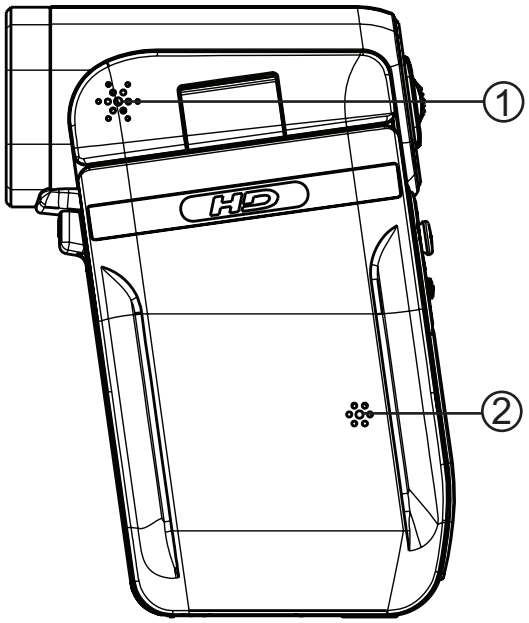
#	Item	Description
⑥	Five-way button	**In record mode** ▷ Press to turn the light on and off. One press turns on the digital light, two presses tuns on the LED light, and three presses turns off the light. **Note:** The digital light function increases the sensitivity of the camcorder's imaging sensor, which increases the grain of the image. The LED light is the light on the front of the camcorder. It is excellent for dark environments and has a range of 2 to 4 feet (0.6 to 1.2 meters). ◁ Press to turn the self-timer on or off. The self-timer is only available in camera mode. **In playback mode** ▷ Press to go to the next movie or picture. Press and hold to fast-forward during movie playback. ◁ Press to go to the previous movie or picture. Press and hold to fast-reverse during movie playback. △ Press to turn the indicators on the LCD display on or off during picture playback or in movie playback when a movie is paused. When a movie is playing, press to increase the volume. ▽ Press to delete the current movie or picture. A movie must be stopped (not paused) in order to delete it. If you press this button while a movie is playing or is paused, the playback volume is decreased. **SET** In picture playback mode, press to start a slideshow. In picture magnification mode, press to resume normal playback. **In menu mode** ▷ Press to adjust a setting. ◁ Press to adjust a setting. △ Press to move up in the list of options. ▽ Press to move down in a list of options. **SET** Press to open the record menu and to confirm changes to menu settings.
⑦	(exit) button	**In record or playback mode** Press to switch between record and playback mode. After you stop recording, press to quickly review the movie you recorded. **In menu mode** Press to go to the previous page.
⑧	TV out port	Connect a non-high-definition TV to this port using the supplied A/V cable.
⑨	HDMI out port	Connect an HDMI-enabled TV to this port.
⑩	Mini USB port	Connect a computer to this port using the supplied USB cable. Connect the supplied AC adapter/charger to this port to charge the battery.
⑪	Strap hook	Attach the carrying strap to this hook.

Right



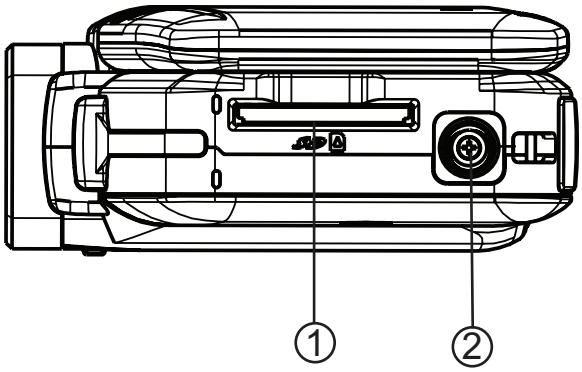
#	Item	Description
①	 Macro switch	Slide to switch between Macro mode and Normal △ mode. Switch to Macro mode to take close-up pictures of objects between 6 in. ~ 10 in. (15 cm ~ 25 cm) away. When your camcorder is in Macro mode, appears on the LCD.
②	Battery cover	Slide off to install the battery. For more information, see “Installing the battery” on page 6.

Left



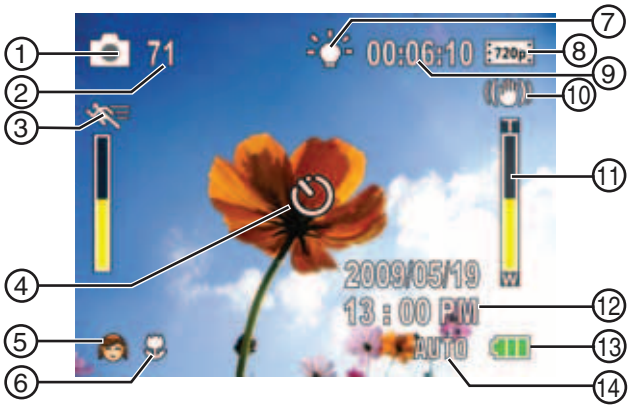
#	Item	Description
1	Speaker	In playback mode, plays the audio recorded with movies.
2	Microphone	In record mode, records sound.

Bottom



#	Item	Description
1	SD card slot	Insert an SD/SDHC memory card (not included) into this slot to increase the storage capacity.
2	Tripod socket	Screw a tripod (not included) to this socket to increase stability and help avoid blurry pictures or movies.

LCD recording mode icons



#	Item	
1	**Picture resolution**	
		2592 x 1944 (5 megapixels)
2	**71**	If a memory card is inserted, indicates the number of pictures that can be taken at the current resolution with the card's unused memory. If no memory card is inserted, indicates the number of pictures that can be taken at the current resolution with your camcorder's unused internal memory.
3		Motion Detection (Simple Mode off)
4		Self-timer
	Scene (Simple Mode off)	
5		Backlight
		Night
		Face
6		Macro
7		Digital light
		LED light
	Movie resolution (Simple Mode on)	
	HD	HD
	SD	SD
	Movie resolution (Simple Mode off)	
8	720p	HD 720p
	WIDE	SD wide
	SD	SD standard
	QVGA	QVGA
9	**00:06:10**	Movie recording time remaining at the current resolution
10		Stabilization

#	Item	
11		Zoom meter: 4x digital zoom
12	**2009/05/19 1 : 00 PM**	Date and time
13		Battery power full
		Battery power medium
		Battery power low
		Battery power depleted
	Color balance (Simple Mode off)	
14	**AUTO**	Auto
		Daylight
		Fluorescent
		Tungsten

LCD playback mode icons

#	Item	
1	**00:06:10**	Movie playback time counter
2	**0005/0005**	Current number/total number of movies or pictures
3		Volume

#	Item	
	Movie resolution (Simple Mode on)	
		HD
		SD
	Movie resolution (Simple Mode off)	
4		HD 720p
		SD wide
		SD standard
		QVGA
5		Indicates your camcorder is in movie playback mode. The icon on the right toggles between ▶ and ‖ each time you press .

#	Item	Description
1		Indicates your camcorder is in photo playback mode
2	**0005/0005**	Current number/total number of pictures
3		Magnification area
4	**2009/05/19 1 : 00 PM**	Date and time stamp

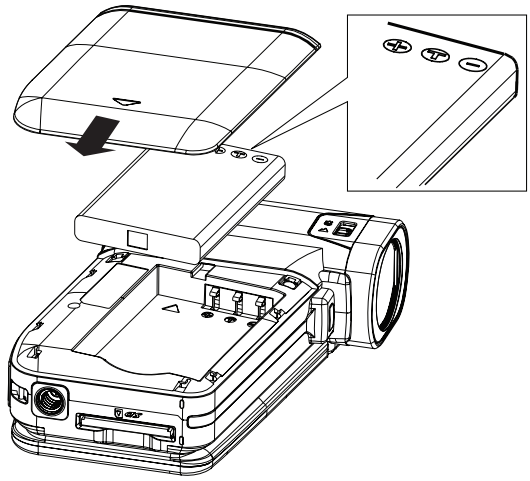
Setting up your camcorder

Installing the battery

Before using your camcorder, you need to install the battery.

To install the battery:

1. Slide the battery cover off your camcorder.



2. Insert the battery. Make sure that the + and – symbols on the battery line up with the + and – symbols on your camcorder.
3. Replace the battery cover. Make sure that it is firmly in place.

Charging the battery

Caution

You must use the supplied AC adapter or USB cable to power your camcorder or charge the battery.

You can use your camcorder while the AC adapter is connected, but the battery will not charge if your camcorder is in use.

While the battery is charging, the record/power light blinks. When charging is complete, the record/power light is solid.

To charge the battery:

1. Make sure that your camcorder is turned off.
2. Connect the AC charger to your camcorder's mini USB port and to a power outlet.

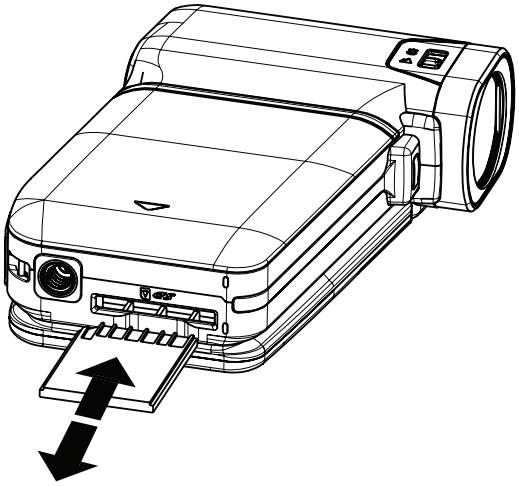
   Or,

   Connect the USB cable to the mini USB port on your camcorder and to a USB port on a computer.

Inserting or removing an SD/SDHC memory card

To insert or remove an SD/SDHC memory card:

1. Insert the card into the memory card slot with the arrow on the card pointing toward the slot and the label facing up.



2. To remove the card, press in on the card to release it. When the card pops out slightly, pull it out of the slot.

Notes

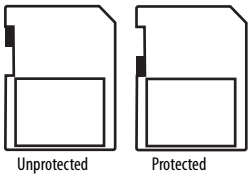
- We recommend using a memory card with a capacity of 1 GB or higher.
- When a memory card is inserted, movies and pictures are automatically saved to the card rather than to the internal memory.

Protecting data on an SD/SDHC memory card

You can protect an SD/SDHC memory card to prevent the recording or deletion of pictures or movies.

To protect an SD/SDHC memory card:

- Slide the protection tab into the protected position.



Getting started

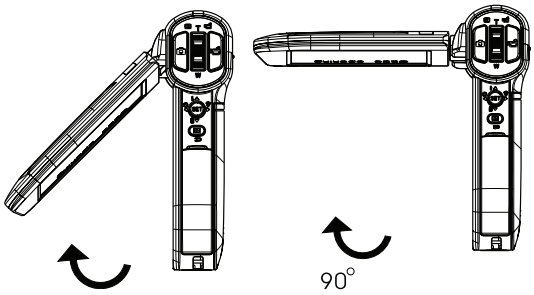
Turning your camcorder on or off

To turn your camcorder on or off:

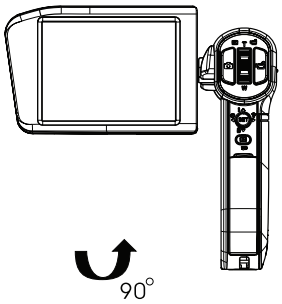
1 Press down and hold ⏻ (power) for one second.

Or

Open the LCD panel 90°.



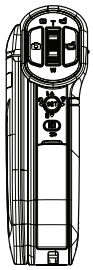
2 Rotate the LCD panel 90° counter-clockwise so you can view pictures and movies.



3 To turn off your camcorder, press down and hold ⏻ (power) for one second.

Or

Return the LCD to its original (closed) position.



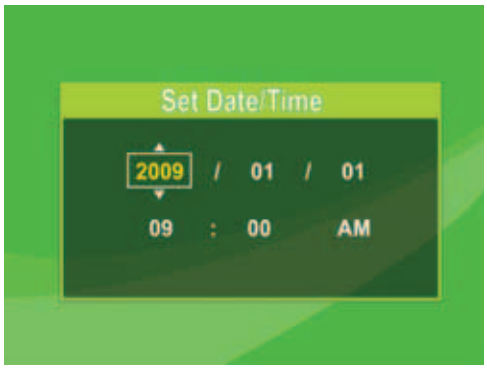
Turning on your camcorder for the first time

When you turn on your camcorder for the first time, you need to choose a menu language and set the date and time.

To choose a menu language and set the date and time:

1 Turn on your camcorder. The language screen opens.

2 Press △ or ▽ to select a language, then press **SET**. The *Set Date/Time* screen opens.



3 Press △ or ▽ to set the year, then press ▷ to move to the month field.

4 Repeat Step 3 to enter the day, hour, and minute, and to select AM or PM.

5 When you are finished, press **SET**.

Note

If you reset your camcorder to the default settings, you will have to select the menu language and set the date and time again.

Initial settings

When you turn on your camcorder for the first time, your camcorder will be in Simple Mode. Simple Mode hides advanced settings and makes your camcorder easier to operate.

Your camcorder's default settings are:

- **Video Format**: HD (1280 x 720p, 30 fps). This is the highest quality video resolution that your camcorder offers. You can switch it to SD (640 x 480p, 30 fps) mode. SD mode is preferable when the movies you capture will only be watched on a standard definition TV. SD mode also uses less memory than HD mode.
- **Stabilization**: Off. Image stabilization is ideal for reducing blurred images that may be caused by shaky hands or low-light conditions. Turn off Stabilization when using a tripod.
- **Sounds**: On. When sounds are turned on, an alert is heard when key functions are accessed.

Additional settings become available when Simple Mode is turned off. To turn off Simple Mode, see "Turning Simple Mode off" on page 11.

- **Simple Mode**: On. Turn off Simple Mode to access advanced settings.

Default advanced settings:

- **Motion Detection**: Off.
- **Scene Mode**: Auto.
- **Color Balance**: Auto.
- **Time Stamp**: Off.
- **Help Text**: On.
- **TV Format**: NTSC.
- **File Format**: AVI.

A brief description of what the advanced settings do is provided by the viewing help text at the bottom of the screen. To view the help text, highlight any menu option.

IMPORTANT

Your camcorder ships with the default file format set to AVI. AVI is ideal for users of Windows® XP, Windows Vista®, or Windows® 7 computers. You can view and edit AVI files with the included ArcSoft MediaImpression software.

If you are a Mac™ user, you should change the default file format to MOV. MOV files may be easily viewed and edited on Mac computers using QuickTime™ or iMovie™ (not included).

The file format cannot be changed after a recording is created. You should select the file format before you start recording.

Recording a movie

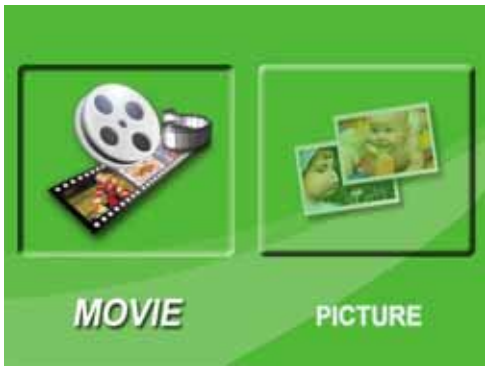
To record a movie:

1. Turn on your camcorder.
2. Aim the lens, then press to start recording. Press again to stop recording.
3. Press immediately after recording to view the recording.

Viewing movies

To view movies:

1. Press to switch to playback mode. The playback mode main menu opens.



2. Press ◁ or ▷ to highlight **MOVIE**, then press **SET** to go to movie playback mode.
3. Press ◁ or ▷ to highlight the movie you want to view, then press **SET**.
4. Press to play the movie.
5. While the movie is playing, you can press:
   - ◁ or ▷ to fast-rewind or fast-forward the movie. Press the button again to resume normal playback.
   - Press **T** or △ to increase or press **W** or ▽ to decrease the volume.
6. Press again to **pause** playback.

Note

When no buttons are pressed for three seconds during playback, the playback function icons in the upper right of the LCD disappear automatically.

Deleting movies

To delete movies:

1. Press to switch to playback mode. The playback mode main menu opens.

2. Press ◁ or ▷ to highlight **MOVIE**, then press **SET** to go to movie playback mode. The first frame of the last movie recorded is displayed.
3. Press ◁ or ▷ to highlight the movie you want to delete.

4 Press ▽ to highlight **Delete**. A message appears asking you to confirm the deletion.

5 Press △ or ▽ to highlight **Yes**, then press **SET** to delete the movie.

Or,

Press △ or ▽ to highlight **No**, then press **SET** to cancel the deletion. (You can also press ⮌ to cancel the deletion and close the menu.)

Notes

- If a memory card is inserted, you can delete only movies stored on the card.
- Movies stored on a write-protected memory card cannot be deleted.

Taking a picture

To take a picture:

1 Turn on your camcorder.

2 Aim the lens, then press 📷.

3 Press ⮌ to view the picture. Press two more times to go back to record mode.

Note

If the selected **Video Format** is a wide format (HD, HD 720p, or SD Wide), the image displayed on your camcorder in record mode will have black bars. However, pictures will always be captured in 4:3 (full frame) format.

Taking a close-up picture

Switch to Macro mode to take close-up pictures of objects between 6 in. ~ 10 in. (15 cm ~ 25 cm) away.

To take a close-up picture:

1 Turn on your camcorder.

2 Slide the Macro switch to the macro 🌷 position. 🌷 appears on the LCD.

3 Aim the lens, then press 📷.

4 Press ⮌ to view the picture. Press two more times to go back to record mode.

Note

Make sure that you return the Macro switch to the normal position when you are not taking close-up pictures.

Viewing pictures

You can view pictures stored on your camcorder or memory card. If a memory card is inserted, you can only view pictures stored on the memory card.

To view pictures:

1 Press ⮌ to switch to playback mode. The playback mode main menu opens.

2 Press ◁ or ▷ to highlight **PICTURE**, then press **SET** to go to picture playback mode. The most recent photo captured is displayed.

3 While viewing pictures, you can press:

- ◁ or ▷ to go to the previous or next picture.
- **T** to magnify the picture. To move around in a magnified picture, press ◁ ▷ △ or ▽. Press **SET** to resume normal viewing
- **SET** to start a slideshow. Press this button again to pause the slideshow.

Deleting pictures

To delete pictures:

1. Press ⮌ to switch to playback mode. The playback mode main menu opens.

2. Press ◁ or ▷ to highlight **PICTURE**, then press **SET** to go to picture playback mode. The most recent photo captured is displayed.
3. Press ◁ or ▷ to select the picture you want to delete.
4. Press ▽ to highlight **Delete**. A message appears asking to confirm the deletion.

5. Press △ or ▽ to highlight **Yes**, then press **SET** to delete the picture.

   Or,

   Press △ or ▽ to highlight **No**, then press **SET** to cancel the deletion. (You can also press ⮌ to cancel the deletion and close the menu.)

Notes

- If a memory card is inserted, you can delete only pictures stored on the card.
- Pictures stored on a write-protected memory card cannot be deleted.

Using camcorder features

Using the light

Your camcorder has a built-in light to provide lighting in low-light environments.

To use the light:

1. Press ▷ on the five-way switch. The light turns on and ☀ (digital light) appears on the LCD. Digital light extends the dynamic range for backlight and provides high contrast so objects will be brighter and clearer.

Notes

Using the digital light will increase the grain of your movie. This slight reduction in image quality is normal.

2. Press ▷ again. The light changes to normal light and ☀ appears on the LCD and indicates that the LED light is turned on. The LED light provides additional lighting in low-light environments and has a range of 2 to 4 feet (0.6 to 1.2 meters).
3. Aim the lens, then press ● to start recording. Press ● again to stop recording.
4. Press ▷ again to turn off the light.

Note

The LED light is automatically disabled when battery power is low.

Using the self-timer

When you turn on the self-timer, your camcorder waits 10 seconds before taking a picture.

To use the self-timer:

1. Aim the lens, then press ◁. ⏲ appears on the LCD.
2. Press 📷. The LED light on the front of your camcorder blinks until the shutter operates (about 10 seconds after you press 📷. The speed of the blinking increases just before the picture is taken.

Using zoom

Zoom magnifies images when recording movies or taking pictures.

To use zoom:

1. Press **T** on the Tele/Wide button to zoom in. The maximum digital zoom is 4x.
2. Press **W** on the Tele/Wide button to zoom out.

Adjusting camcorder settings

Turning Simple Mode off

Your camcorder comes from the factory in Simple Mode. Simple Mode hides advaced user settings and makes your camcorder easier to use right out of the box. Turning off Simple Mode lets you access advaced settings, such as video format options, motion detection, scene condition, and color balance.

To turn off Simple Mode:

1. Press ⮒ to enter Record mode. The record/power indicator on the back of your camcorder lights blue.
2. Press **SET**. The Simple menu opens.

3. Press ◁ or ▷ to highlight the 🛠 (settings) tab. The *Settings menu* opens.

4. Press △ or ▽ to highlight **Simple Mode**, then press **SET** or ▷. The *Simple Mode* screen opens.
5. Press △ or ▽ to highlight **Off**, then press **SET**. To turn on Simple Mode, select **On**.
6. Press ⮒ to close the menu.

Turning operation sounds on or off

By default, your camcorder makes sounds when you access key functions. You can turn the sounds off.

To turn operation sounds on or off:

1. Press ⮒ to enter Record mode. The record/power indicator on the back of your camcorder lights blue.
2. Press **SET**. The menu opens.

3. Press ◁ or ▷ to highlight the 🛠 (settings) tab.

4. Press △ or ▽ to highlight **Sounds**, then press **SET** or ▷. The *Sounds* screen opens.

5. Press △ or ▽ to highlight **On** or **Off**, then press **SET**.
6. Press ⮒ to close the menu.

Setting the video format

To set the video format:

1. Press ⮒ to enter Record mode. The record/power indicator on the back of your camcorder lights blue.
2. Press **SET**. The Menu opens.
3. Press ◁ or ▷ to highlight the 🎥 (movie) tab, then press ▽ to highlight **Video Format**.
4. Press **SET** or ▷. The *Video Format* screen opens.

   Simple Mode Off

5. Press △ or ▽ to highlight a resolution, then press **SET**. You can select:
   - **SD**—(Simple Mode only) SD mode resolution is 640 x 480p, 30 fps, 4:3 format. SD resolution requires less memory than HD resolution and is a good choice if you will only be watching your videos on an SD, 4:3 television. **Note: SD** mode is called **SD Std.** when Simple Mode is off.
   - **HD**—(Simple Mode only) HD mode resolution is 1280 x 720p, 30 FPS, 16:9 format. This mode requires the most memory, but also produces the highest quality video images your camcorder can offer. This resolution is ideal if you will be watching your movies on an HDTV. **Note: HD** mode is called **HD 720p** when Simple Mode is off.
   - **HD 720p**—(Only accessible when Simple Mode is off) HD 720p mode resolution is 1280 x 720p, 30 fps, 16:9 format. This mode requires the most memory, but also produces the highest quality video images your camcorder can offer. This resolution is ideal if you will be watching your movies on an HDTV. **Note: HD 720p** mode is called **HD** when Simple Mode is on.
   - **SD Wide**—(Only accessible when Simple Mode is off) SD Wide capture resolution is 848 x 480, 60 fps, 16:9 format. This mode is ideal if you want wide-format video, but want to use less memory space than would be used in the camcorder's HD (720p) mode. The higher frame rate offered by SD Wide mode is also excellent for filming action movies, such as sporting events. SD Wide movies will be upconverted to 720p if played back when your camcorder is connected to a TV using an HDMI cable (not included).
   - **SD Std.**—(Only accessible when Simple Mode is off) SD Std. mode resolution is 640 x 480p, 4:3 format. SD Standard resolution requires less memory than HD resolution and is a good choice if you will only be watching your videos on an SD, 4:3 television. **Note: SD Std.** mode is called **SD** when Simple Mode is on.
   - **QVGA**—(Only accessible when Simple Mode is off) The resolution is 320 x 240, 30 fps, 4:3 format. This mode is ideal you want to e-mail your videos or upload them to a video sharing service such as YouTube™. This mode requires the least amount of memory, but also produces the lowest quality videos.
6. Press ⮒ to close the menu.

Turning stabilization on or off

The Stabilization feature increases stability and helps avoid blurry movies in low-light conditions or when your hands are not steady.

To turn stabilization on or off:

1. Press ⮒ to enter Record mode. The record/power indicator on the back of your camcorder lights blue.
2. Press **SET**. The Menu opens.
3. Press ◁ or ▷ to highlight the 🎥 (movie) tab, press ▽ to highlight **Stabilization**, then press **SET** or ▷. The *Stabilization* screen opens.

4. Press △ or ▽ to highlight **On** or **Off**, then press **SET**.
5. Press ⮒ to close the menu.

Note

The Stabilization feature is only supported in SD (Simple Mode), SD Std. (Simple Mode off), or QVCA (Simple Mode off) resolution modes or for still images.

The Stabilization feature should be turned off if you are using a tripod.

Turning motion detection on or off

Your camcorder has a motion detection feature. If this feature is turned on, your camcorder starts recording when it detects movement. Press 🎥 to stop recording.

To turn motion detection on or off:

1. Press ⮒ to enter Record mode. The record/power indicator on the back of your camcorder lights blue.
2. Press **SET**. The menu opens.

3 Make sure that Simple Mode is off. See "Turning Simple Mode off" on page 11.

4 Press ◁ or ▷ to highlight the (movie) tab, press ▽ to highlight **Motion Detection**, then press **SET** or ▷. The *Motion Detection* screen opens.

5 Press △ or ▽ to highlight **On** or **Off**, then press **SET**.

6 Press ⮒ to close the menu.

Note

If you are recording a movie with Motion Detection turned on and you stop recording, Motion Detection is automatically turned off. To turn it back on again, repeat these steps.

Selecting the scene mode

Your camcorder has four scene modes to help optimize your movies and pictures.

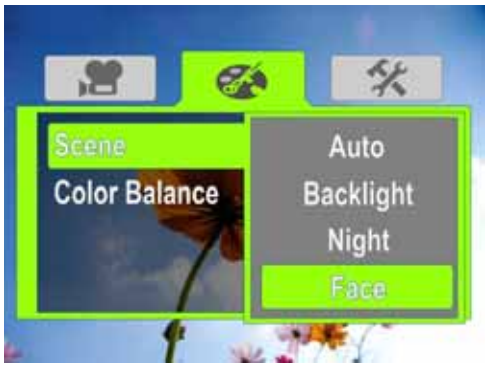
To select the scene mode:

1 Press ⮒ to enter Record mode. The record/power indicator on the back of your camcorder lights blue.

2 Press **SET**. The menu opens.

3 Make sure that Simple Mode is off. See "Turning Simple Mode off" on page 11.

4 Press ◁ or ▷ to highlight the (effect) tab, press ▽ to highlight **Scene**, then press **SET** or ▷. The *Scene* screen opens.



5 Press △ or ▽ to highlight a scene mode, then press **SET**. You can select:

- **Auto**—Select this option when there are no special lighting conditions. Your camcorder will automatically choose the best settings for your subject.
- **Backlight**—Select this option when there is bright light behind the subject.
- **Night**—Select this option for night scenes or low-light conditions.
- **Face**—Select this option to make skin tones more natural.

6 Press ⮒ to close the menu.

Note

To avoid blurry pictures when **Night** mode is selected, place the camcorder on a flat, steady surface, or use a tripod.

Adjusting the color balance

Your camcorder automatically adjusts the color balance for most conditions. However, you can manually select the color balance for special conditions.

To adjust the color balance:

1 Press ⮒ to enter Record mode. The record/power indicator on the back of your camcorder lights blue.

2 Press **SET**. The menu opens.

3 Make sure that Simple Mode is off. See "Turning Simple Mode off" on page 11.

4 Press ◁ or ▷ to highlight the (effect) tab, press ▽ to highlight **Color Balance**, then press **SET** or ▷. The *Color Balance* screen opens.

5 Press △ or ▽ to highlight a color balance mode, then press **SET**. You can select:

- **Auto**—Select this option to let your camcorder automatically adjust the white balance.
- **Daylight**—Select this option when recording movies or taking pictures outdoors.
- **Fluorescent**—Select this option when the light source is fluorescent.
- **Tungsten**—Select this option when the light source is tungsten.

6 Press ⮒ to close the menu.

Imprinting the date and time on pictures

You can imprint the date or the date and time on pictures.

Note

Date and time cannot be imprinted on movies.

To imprint the date and time on pictures:

1. Press ⮌ to enter Record mode. The record/power indicator on the back of your camcorder lights blue.
2. Press **SET**. The menu opens.
3. Make sure that Simple Mode is off. See "Turning Simple Mode off" on page 11.
4. Press ◁ or ▷ to highlight the 🛠 (settings) tab. The *Settings menu* opens.

5. Press ▽ to highlight **Time Stamp**, then press **SET** or ▷. The *Time Stamp* screen opens.

6. Press △ or ▽ to highlight an option, then press **SET**. You can select:
   - **Date & Time**—Imprints the date and time on pictures.
   - **Date**—Imprints the date on pictures.
   - **Off**—Turns the time stamp feature off.
7. Press ⮌ to close the menu.

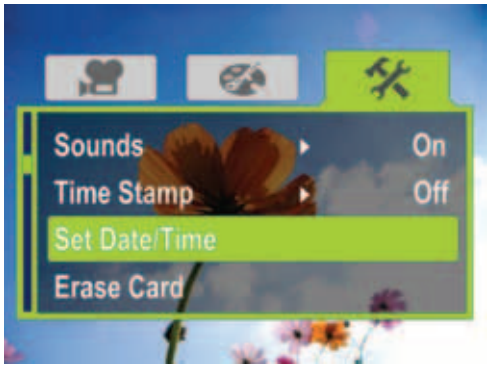
Note

Once the date or date and time are imprinted on a picture, they cannot be removed.

Setting the date and time

To set the date and time:

1. Press ⮌ to enter Record mode. The record/power indicator on the back of your camcorder lights blue.
2. Press **SET**. The menu opens.
3. Make sure that Simple Mode is off. See "Turning Simple Mode off" on page 11.
4. Press ◁ or ▷ to highlight the 🛠 (settings) tab. The *Settings* menu opens.



5. Press ▽ to highlight **Set Time/Date**, then press **SET** or ▷. The *Set Time/Date* screen opens.

6. Press ◁ or ▷ to move between the fields, then press △ or ▽ to change the values in the fields. The formats are *YEAR/MONTH/DAY* and *HOUR:MINUTES*.
7. Press **SET** to save your settings, then press ⮌ to close the menu.

Erasing an SD/SDHC memory card or the internal memory

If the files on an SD/SDHC memory card do not display smoothly and the LCD displays the "!" symbol, the card is formatted for low speed or has the wrong type of content on it. To correct this problem, format the card in your camcorder instead of in a computer.

Caution

When you use the Erase feature, all files stored on the card or in internal memory are deleted. Make sure that you backup any files you want to save to a computer before you use the Erase feature.

Note

If an SD/SDHC memory card is inserted in your camcorder, the Erase feature erases and formats the card.

If no SD/SDHC memory card is inserted, the Erase feature erases the internal memory.

To erase an SD/SDHC memory card or the internal memory:

1. Press ⮌ to enter Record mode. The record/power indicator on the back of your camcorder lights blue.
2. Press **SET**. The menu opens.

3. Press ◁ or ▷ to highlight the 🛠 (settings) tab.

No card inserted

Card inserted

4. Press △ or ▽ to highlight **Erase Card** (if a card is inserted) or **Erase Memory** (if a card is not inserted), then press **SET** or ▷. The *Erase Card* screen opens.

Erase Card

Erase Memory

5. Press △ or ▽ to select **Yes** or **No**, then press **SET** to confirm or press ⮌ to close the menu without formatting.

Selecting the menu language

To select the menu language:

1. Press ⮌ to enter Record mode. The record/power indicator on the back of your camcorder lights blue.
2. Press **SET**. The menu opens.
3. Make sure that Simple Mode is off. See "Turning Simple Mode off" on page 11.

4 Press ◁ or ▷ to highlight the 🛠 (settings) tab. The *Settings menu* opens.

5 Press ▽ to highlight **Language**, then press **SET** or ▷. The *Language* screen opens.

6 Press ◁ or ▷ to highlight a language, then press **SET**.

7 Press ⮌ to close the menu.

Turning help text on or off

Your camcorder can display scrolling help text to make using your camcorder easier.

To turn help text on or off:

1 Press ⮌ to enter Record mode. The record/power indicator on the back of your camcorder lights blue.

2 Press **SET**. The menu opens.

3 Make sure that Simple Mode is off. See "Turning Simple Mode off" on page 11.

4 Press ◁ or ▷ to highlight the 🛠 (settings) tab. The *Settings* menu opens.

5 Press ▽ to highlight **Help Text**, then press **SET** or ▷. The *Help Text* screen opens.

6 Press △ or ▽ to highlight **On** or **Off**, then press **SET**.

7 Press ⮌ to close the menu.

Selecting the TV format

If you connect your camcorder to a TV, you need to make sure that your camcorder is set to the correct TV standard. The wrong TV standard may cause images to flicker.

The NTSC standard is used in the USA, Canada, Mexico, Japan, South Korea, and Taiwan.

The PAL standard is used in the UK, Europe, China, Australia, Singapore, and Hong Kong.

To select the TV format:

1 Press ⮌ to enter Record mode. The record/power indicator on the back of your camcorder lights blue.

2 Press **SET**. The menu opens.

3 Make sure that Simple Mode is off. See "Turning Simple Mode off" on page 11.

4 Press ◁ or ▷ to highlight the 🛠 (settings) tab. The *Settings* menu opens.

5 Press ▽ to highlight **TV Format**, then press **SET** or ▷. The *TV Format* screen opens.

6 Press ◁ or ▷ to highlight **NTSC** or **PAL**, then press **SET**.

7 Press ⮌ to close the menu.

Selecting the file format for movies

To select the file format for movies:

1 Press ⮌ to enter Record mode. The record/power indicator on the back of your camcorder lights blue.

2 Press **SET**. The menu opens.

3 Make sure that Simple Mode is off. See "Turning Simple Mode off" on page 11.

4 Press ◁ or ▷ to highlight the 🛠 (settings) tab. The *Settings menu* opens.

5 Press ▽ to highlight **File Format**, then press **SET** or ▷. The *File Format* screen opens.

6 Press ◁ or ▷ to highlight a file format then press **SET**. You can select:

- **AVI**—Select this format if you are using a Windows-based computer and/or intend to use the included ArcSoft MediaImpression software to view and edit movies.
- **MOV**—Select this format if you are using *QuickTime* (not included) to view movies. This setting is ideal for users of Mac computers. Note: Movies cannot be edited in *ArcSoft MediaImpression* if this format is selected.

Note

The file format cannot be changed after a recording is created. You should select the file format before you start recording.

7 Press ⮌ to close the menu.

Resetting to factory defaults

Note

If you reset your camcorder to the default settings, you will have to select the menu language and set the date and time again. For more information, see "Turning on your camcorder for the first time" on page 7.

To reset your camcorder to its original factory default settings:

1. Press ⮌ to enter Record mode. The record/power indicator on the back of your camcorder lights blue.
2. Press **SET**. The menu opens.

3. Press ◁ or ▷ to highlight the 🛠 (settings) tab.
4. Press △ or ▽ to highlight **Factory Reset**, then press **SET** or ▷. The *Factory Reset* screen opens.

5. Press △ or ▽ to select **Yes** or **No**, then press **SET** to confirm or press ⮌ to close the menu without resetting.

Note

- Resetting your camcorder to the factory defaults does not delete movies and pictures store on internal memory.

Viewing movies and pictures on a TV

Note

When your camcorder is connected to a TV:

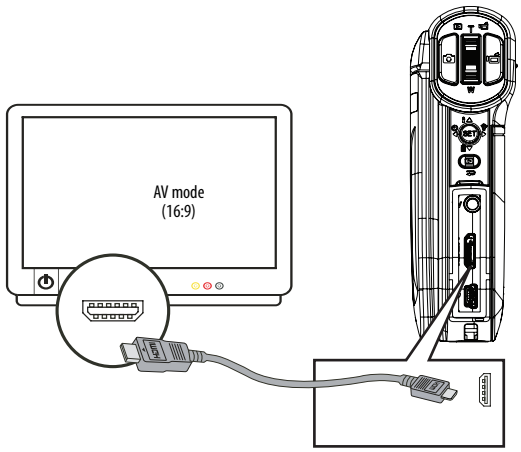
- The LCD does not display.
- You cannot record movies or take pictures if using your camcorder's HDMI connection.

After you connect the TV, follow the instructions in "Viewing movies" on page 8 or "Viewing pictures" on page 9 to view movies or pictures.

Connecting to an HDMI enabled TV

To connect an HDMI enabled TV:

1. Connect a mini HDMI to HDMI cable (not included) to the **HDMI** port on your camcorder and to an **HDMI IN** port on the TV.

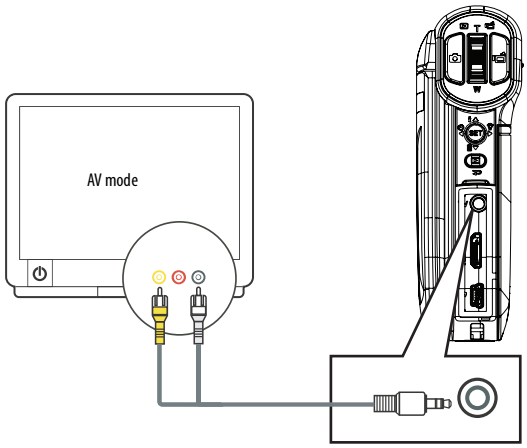


2. Set the video input source of the TV to **HDMI**.

Connecting to a TV using the supplied A/V cable

To connect to a TV using the supplied A/V cable:

1. Connect the A/V cable (included) to the **TV** port on your camcorder and to the **VIDEO IN** (yellow) and **L AUDIO IN** (white) ports on the TV.



2 Set the TV's video input to the correct source. This may be called "AV," "Composite," or something else.

Note

When using the TV out jack on your camcorder, all movies will be output in an interlaced format.

Viewing movies and pictures on a computer

Installing software

Your camcorder comes with:

ArcSoft MediaImpression—A user-friendly program that helps you manage your media, burn your movies to DVDs, and upload your movies to YouTube.

Note

The included software is compatible with Windows XP, Windows Vista, and Windows 7 only.

To install software:

1 Insert the included CD into the CD or DVD drive on your computer.

2 Click **Install MediaImpression**, then follow the on-screen instructions to complete the installation.

Note

Detailed information for using a program can be found in the program's online help.

Note

ArcSoft MediaImpression must be installed to view movies in .avi format on your Windows-based computer. If you do not want to install ArcSoft MediaImpression, but want to watch your .avi formatted movies on your Windows-based computer, alternative software is available at Web sites such as http://ffdshow.info/.

Transferring movies or pictures to a computer

You can transfer movies or pictures to a computer to e-mail to family and friends or post on a Web site.

To transfer movies or pictures to a computer:

1 Connect the supplied mini USB cable to the mini USB port on your camcorder and to a USB 2.0 port on the computer. The record/power LED lights and starts blinking.

2 **Windows® XP, Windows Vista® or Window 7:**

Open **My Computer** or **Windows Explorer**. If a card is inserted, two new drives will appear in the drive list; otherwise, one new drive (camcorder's internal memory) will appear. The internal memory drive will show up as DV. The card drive will show up as whatever label the card shipped with or that you selected if you formatted the card in your computer. If you erased the card in the camcorder, the label will be **DV-SD Card**.

Mac OS 10.x and higher:

Two new drive icons will appear on the desktop or in the sidebar if a card is inserted. Otherwise, one new drive icon appears. The internal memory drive will show up as **DV**. The card drive will show up as whatever label the card shipped with or that you selected if you formatted the card in your computer. If you erased the card in the camcorder, the label will be **DV-SD Card**.

3 Double-click the drive you want to view. Your movie and photo fi les will be in the **\DCIM\100MEDIA** folder.

Note

If you previously named your memory card something else, such as "SD Card," that name is retained and will be displayed in My Computer (Windows), on the desktop, or in the sidebar (Mac) unless you erase the card using your camcorder. If you erase the card using your camcorder, the card will be labeled DV - SD Card. For more information, see "Erasing an SD/SDHC memory card or the internal memory" on page 15.

You can view, copy, delete, and move any movies or pictures you want using normal procedures for your computer's operating system.

You can use *ArcSoft MediaImpression* to edit movies or pictures (Windows XP, Windows Vista, or Windows 7). For more information, see "Installing software" on page 19.

Note

Although you can save an edited movie to camcorder's memory card, we do not recommended it. When you edit a movie, the changes you make may make the movie unviewable on your camcorder. To safeguard your edited movie, save it to your computer.

Burning a movie to a DVD

If your computer runs the Windows XP, Windows Vista, or Windows 7 operating system, you can use *ArcSoft MediaImpression* to burn a movie to DVD, then play the movie using regular DVD player.

To burn a movie to a DVD:

1 Install *ArcSoft MediaImpression*. For more information, see "Installing software" on page 19.

2 Make sure that you have a blank, writeable DVD in the computer's DVD drive.

3 In Windows, click **Start**, **All Programs**, click **ArcSoft MediaImpression**, then click**MediaImpression**. The *Welcome to ArcSoft MediaImpression* screen opens.

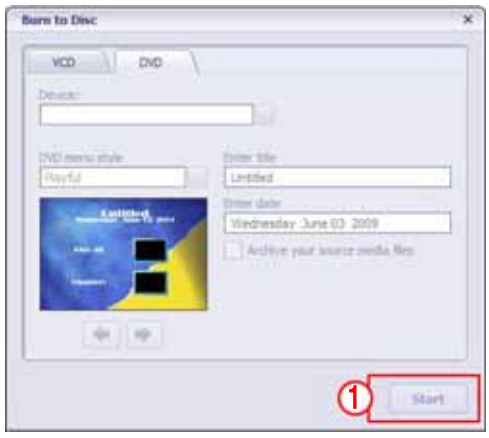
4 Click **Make Movie**. The *Make Movie* screen opens.

5 Under **Folders** (1), open the folder that contains the movies you want to burn to DVD.

6 In the preview area (2), select the file you want to burn.

7 In the **Make Movie** area, click the select button (3).

8 Click **Burn to Disc** (4). The *Burn to Disc* screen opens.



9 Click **Start**. Your movie is burned to the DVD.

Troubleshooting

Problem	Solution
Image on the LCD is blurry	Try switching between Macro and Normal mode. Use Macro mode for objects between 6 in. ~ 10 in. (15 cm ~ 25 cm) away. Use Normal mode for objects over 5 ft. (150 cm) away.
The LED light on the front of the camcorder is not working	Battery power is low. Charge the battery. You cannot turn on the LED light after you start recording. Stop recording, turn on the light, then start recording again.
The files on the memory card do not display smoothly and the LCD shows the "!" icon	The "!" means the SD card is low speed or the files on the card are the wrong type. Use your camcorder to format your card instead of a computer. See "Erasing an SD/SDHC memory card or the internal memory" on page 15.
Indoor pictures look blurry and dark	Your camcorder extends the exposure time under low-light or indoor conditions. Keep your camcorder and photographed subject steady for several seconds when taking pictures. The shutter sounds when a picture has been taken.

Specifications and default settings

Specifications

Specifications are subject to change without notice.

Note

The LCD screen is manufactured using extremely high-precision technology so over 99.99% of the pixels are operational for effective use. However, some tiny black or bright dots (white, red, blue, or green) may appear on the LCD screen. These dots are a normal result of the manufacturing process, and do not affect the recording.

Image sensor	5 megapixel CMOS sensor
Operation modes	Video record Picture record
Lens	F2.5 (f=5.7mm)
Focus range	Normal mode: 5 ft. (150 cm) ~ infinite (still image) 3.6 ft. (110cm) ~ infinite (720p video) Macro Mode: Center 8 in. (20cm)
Zoom	4× digital zoom
Shutter	Electronic
LCD monitor	3"
Storage media	Internal 128 MB memory (approximately 90 MB is available for movie and picture capture) SD/SDHC card support (up to 32GB)
Image resolution	2592 x 1944 (5 megapixels)
Video resolution	HD(720p)/HD: 1280 x 720 (30 fps) SD Wide: 848 x 480 (60 fps) SD Standard/SD: 640 x 480 (30 fps) QVGA: 320 x 240 (30 fps)
Color balance	Auto/Manual (Daylight, Fluorescent, Tungsten)
Self-timer	10-second delay
Light	LED lamp
File format	Picture: JPG Video: H.264 in AVI or MOV format
Image play	Single image and slideshow
Computer interface	mini USB 2.0 port
TV out	NTSC/PAL selectable, mini HDMI, or AV out
Battery	Lithium-ion rechargeable battery (NP-60)
Dimensions H × W × D	4.29 × 3.15 × 1.1 inches (10.9 × 8 × 2.8 cm)
Weight	6.24 oz (170 grams) without battery

Default settings

Setting	Default
Resolution	HD 720p/HD for movies 2592 x 1944 (5 megapixels) for pictures
Stabilization	Off
Motion Detection	Off
Scene	Auto
Color Balance	Auto
Sound	On
Time Stamp	Off
Simple Mode	On
Help Text	On
TV Format	NTSC
File Format	AVI
Volume Level	12
Light	Off
Self-timer	Off

Legal notices

FCC Part 15

This device complies with Part 15 of the FCC Rules. Operation of this product is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply within the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC warning

Changes or modifications not expressly approved by the party responsible for compliance with the FCC Rules could void the user's authority to operate this equipment.

Canada ICES-003 statement

This Class B digital apparatus complies with Canadian ICES-003.

One-year limited warranty

Insignia Products ("Insignia") warrants to you, the original purchaser of this new product ("Product"), that the Product shall be free of defects in the original manufacture of the material or workmanship for a period of one (1) year from the date of your purchase of the Product ("Warranty Period"). This Product must be purchased from an authorized dealer of Insignia brand products and packaged with this warranty statement. This warranty does not cover refurbished Product. If you notify Insignia during the Warranty Period of a defect covered by this warranty that requires service, terms of this warranty apply.

How long does the coverage last?

The Warranty Period lasts for 1 year (365 days) from the date you purchased the Product. The purchase date is printed on the receipt you received with the Product.

What does this warranty cover?

During the Warranty Period, if the original manufacture of the material or workmanship of the Product is determined to be defective by an authorized Insignia repair center or store personnel, Insignia will (at its sole option): (1) repair the Product with new or rebuilt parts; or (2) replace the Product at no charge with new or rebuilt comparable products or parts. Products and parts replaced under this warranty become the property of Insignia and are not returned to you. If service of Products or parts are required after the Warranty Period expires, you must pay all labor and parts charges. This warranty lasts as long as you own your Insignia Product during the Warranty Period. Warranty coverage terminates if you sell or otherwise transfer the Product.

How to obtain warranty service?

If you purchased the Product at a retail store location, take your original receipt and the Product to the store you purchased it from. Make sure that you place the Product in its original packaging or packaging that provides the same amount of protection as the original packaging. If you purchased the Product from an online web site, mail your original receipt and the Product to the address listed on the web site. Make sure that you put the Product in its original packaging or packaging that provides the same amount of protection as the original packaging.

To obtain in-home warranty service for a television with a screen 30 inches or larger, call 1-888-BESTBUY. Call agents will diagnose and correct the issue over the phone or will have an Insignia-approved repair person dispatched to your home. Should the Insignia-approved repair person not correct the issue on the first call, an Insignia television (size and features to be determined by Insignia) will be loaned to you until your TV is repaired and returned, at no charge to you. This feature is only available to Insignia television consumers residing in the United States.

Where is the warranty valid?

This warranty is valid only to the original purchaser of the product in the United States, Canada, and Mexico.

What does the warranty not cover?

This warranty does not cover:

- Customer instruction
- Installation
- Set up adjustments
- Cosmetic damage
- Damage due to acts of God, such as lightning strikes
- Accident
- Misuse
- Abuse
- Negligence
- Commercial use
- Modification of any part of the Product, including the antenna
- Plasma display panel damaged by static (non-moving) images applied for lengthy periods (burn-in).

This warranty also does not cover:

- Damage due to incorrect operation or maintenance
- Connection to an incorrect voltage supply
- Attempted repair by anyone other than a facility authorized by Insignia to service the Product
- Products sold as is or with all faults
- Consumables, such as fuses or batteries
- Products where the factory applied serial number has been altered or removed

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